



August 20, 2019

Arcelor Mittal USA, Inc.
250 W US Highway 12
Burns Harbor, IN 46304-9745

Work Order No.: 19H1228

Re: Ammonia

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 8 sample(s) on 8/20/2019 12:33:00PM for the analyses presented in the following report as Work Order 19H1228.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Ron Misiunas, Division Manager, at ron.misiunas@microbac.com.

Sincerely,
Microbac Laboratories, Inc.

A handwritten signature in black ink that reads "Carey Gadzala". The signature is written in a cursive, flowing style.

Carey Gadzala
Project Manager

[Microbac Laboratories, Inc.](http://www.microbac.com)

250 West 84th Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | www.microbac.com



WORK ORDER SAMPLE SUMMARY

Date: *Tuesday, August 20, 2019*

Client: Arcelor Mittal USA, Inc.
Project: Ammonia
Lab Order: 19H1228

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19H1228-01	Plate Mill Storm Ditch		08/20/2019 12:33	8/20/2019 12:33:00PM
19H1228-02	Main St Storm Ditch		08/20/2019 12:33	8/20/2019 12:33:00PM
19H1228-03	Cannon Storm Ditch		08/20/2019 12:33	8/20/2019 12:33:00PM
19H1228-04	NW Storm Ditch		08/20/2019 12:33	8/20/2019 12:33:00PM
19H1228-05	031		08/20/2019 12:33	8/20/2019 12:33:00PM
19H1228-06	SWTP Effluent		08/20/2019 12:33	8/20/2019 12:33:00PM
19H1228-07	999		08/20/2019 12:33	8/20/2019 12:33:00PM
19H1228-08	001		08/20/2019 12:33	8/20/2019 12:33:00PM



Analytical Results

Date: *Tuesday, August 20, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia
Client Sample ID: Plate Mill Storm Ditch
Sample Description:
Matrix: Aqueous

Work Order/ID: 19H1228-01
Sampled: 08/20/2019 12:33
Received: 08/20/2019 12:33

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 08/20/2019 15:30			
Nitrogen, Ammonia (As N)	di	A	0.24	0.10		mg/L	1	08/20/2019 18:12



Analytical Results

Date: Tuesday, August 20, 2019

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia
Client Sample ID: Main St Storm Ditch
Sample Description:
Matrix: Aqueous

Work Order/ID: 19H1228-02
Sampled: 08/20/2019 12:33
Received: 08/20/2019 12:33

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 08/20/2019 15:30			
Nitrogen, Ammonia (As N)	di	A	0.28	0.10		mg/L	1	08/20/2019 18:15

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Analytical Results

Date: *Tuesday, August 20, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1228-03
Client Project:	Ammonia	Sampled:	08/20/2019 12:33
Client Sample ID:	Cannon Storm Ditch	Received:	08/20/2019 12:33
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 08/20/2019 15:30			
Nitrogen, Ammonia (As N)	di	A	0.32	0.10		mg/L	1	08/20/2019 18:17

Analytical Results

Date: *Tuesday, August 20, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia
Client Sample ID: NW Storm Ditch
Sample Description:
Matrix: Aqueous

Work Order/ID: 19H1228-04
Sampled: 08/20/2019 12:33
Received: 08/20/2019 12:33

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 08/20/2019 15:30			
Nitrogen, Ammonia as N								
Nitrogen, Ammonia (As N)	di	A	0.29	0.10		mg/L	1	08/20/2019 18:20

Analytical Results

Date: *Tuesday, August 20, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1228-05
Client Project:	Ammonia	Sampled:	08/20/2019 12:33
Client Sample ID:	031	Received:	08/20/2019 12:33
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 08/20/2019 15:30			
Nitrogen, Ammonia as N								
Nitrogen, Ammonia (As N)	di	A	0.28	0.10		mg/L	1	08/20/2019 18:22



Analytical Results

Date: Tuesday, August 20, 2019

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia
Client Sample ID: SWTP Effluent
Sample Description:
Matrix: Aqueous

Work Order/ID: 19H1228-06
Sampled: 08/20/2019 12:33
Received: 08/20/2019 12:33

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 08/20/2019 15:30			
Nitrogen, Ammonia (As N)	di	A	0.15	0.10		mg/L	1	08/20/2019 18:24

Analytical Results

Date: *Tuesday, August 20, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia
Client Sample ID: 999
Sample Description:
Matrix: Aqueous

Work Order/ID: 19H1228-07
Sampled: 08/20/2019 12:33
Received: 08/20/2019 12:33

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 08/20/2019 15:30			
Nitrogen, Ammonia (As N)	di	A	0.31	0.10		mg/L	1	08/20/2019 18:27

Analytical Results

Date: *Tuesday, August 20, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Ammonia
Client Sample ID: 001
Sample Description:
Matrix: Aqueous

Work Order/ID: 19H1228-08
Sampled: 08/20/2019 12:33
Received: 08/20/2019 12:33

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0		Analyst: EF			
Nitrogen, Ammonia as N			Prep Method: EPA 350.1 Rev 2.0		Prep Date/Time: 08/20/2019 15:30			
Nitrogen, Ammonia (As N)	di	A	0.46	0.10		mg/L	1	08/20/2019 18:29

ANALYTE TYPES: (AT)

A, B = Target Analyte

I = Internal Standard

M = Summation Analyte

S = Surrogate

T = Tentatively Identified Compound (TIC, concentration estimated)



QC SAMPLE IDENTIFICATIONS

BLK = Method Blank

DUP = Method Duplicate

BS = Method Blank Spike

MS = Matrix Spike

ICB = Initial Calibration Blank

CCB = Continuing Calibration Blank

CRL = Client Required Reporting Limit

PDS = Post Digestion Spike

QCS = Quality Control Standard

ICSA = Interference Check Standard "A"

ICSAB = Interference Check Standard "AB"

BSD = Method Blank Spike Duplicate

MSD = Matrix Spike Duplicate

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

OPR = Ongoing Precision and Recovery Standard

SD = Serial Dilution

CERTIFICATIONS (Certs)

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

^d Illinois EPA drinking water, wastewater and solid waste analysis (#200064)

ⁱ Kansas Dept Health & Env. NELAP (#E-10397)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

RL: Reporting Limit

RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler

Temp: 3.0°C
 MICROBAC®

Comments

No time. Samples preserved at lab

Cooler Inspection Checklist

Ice Present or not required?	Yes
Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes
Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes
Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes
Sample type identified on COC?	Yes
Correct type of Containers Received	Yes
Correct number of containers listed on COC?	Yes
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	No
Samples arrived within hold time?	Yes
Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes
Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes

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RUSH!

CHAIN OF CUSTODY RECORD

Number **152323**
Instructions on back

TO BE COMPLETED BY MICROBAC

Temperature Upon Receipt (°C)

Therm ID

Holding Time

Samples Received on Ice? Yes No N/A

Custody Seals Intact? Yes No N/A

33-03
-33°C

Turnaround Time

Routine (5 to 7 business days)

RUSH* (notify lab)

(needed by)

Report Type

Results Only Level 1 Level 2 Level 3 Level 4 EDD

Send Invoice via: Mail Fax e-mail (address)

Compliance Monitoring? Yes No

Agency/Program

Invoice Address

Client Name:

Address:

City, State, Zip:

Contact:

Telephone No.:

Send Report via: Mail Fax e-mail (address)

Location:

PO No.:

Sampler Phone No.:

Sampler Signature: *[Signature]*

Sampled by (PRINT): *Warren Howard*

* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

** Preservative Types: (1) HNO₃, (2) H₂SO₄, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

REQUESTED ANALYSIS

Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types **	Additional Notes
Storm Ditch Plate	8/20/19		1		G		19H1228
Storm Ditch main			1				01
Storm Ditch Cannon			1				02
Storm Ditch NW			1				03
SWTP Clarifier			1				04
031			1				05
999			1				06
001			1				07
							08

19H1228 Carey Gadzala
 ArcelorMittal - Burns Harbor, IN
 Ammonia
 08/20/2019



Possible Hazard Identification

Hazardous Non-Hazardous Radioactive

Sample Disposition Dispose as appropriate Return Archive

Relinquished By (signature)

Date/Time

Date/Time

Relinquished By (signature)

Date/Time

Date/Time

Relinquished By (signature)

Date/Time

Date/Time

Received By (signature) *[Signature]* Page 48 of 93